

CLAIMS

1 1. A method for manufacturing tiles for use in a raised floor system, the
2 tiles comprising an outer shell and an inner core material, the method comprising
3 steps of:

4 constructing the shells at a manufacturing facility;
5 transporting the shells to a remote location associated with a job site;
6 and
7 filling the shells with a fill material at the remote location.

1 2. The method of Claim 1 further comprising the step of:
2 cleaning the tiles.

3 3. The method of Claim 2 wherein cleaning includes washing the tiles.

4 4. The method of Claim 2 wherein cleaning includes drying the tiles.

5 5. The method in Claim 1 wherein the remote location is a construction
6 site.

7 6. A method for manufacturing tiles for use in a raised floor system, the
2 tiles comprising an outer shell and an inner core material, the method comprising
3 steps of:

4 providing a rack to hold the tiles during the manufacturing process;
5 stacking the shells in a vertical orientation on the rack; and
6 filling the shells with a cementitious mixture core material while on the
7 rack.

1 7. The method of Claim 6 further comprising the step of:
2 cleaning the tiles while on the rack.

1 8. The method of Claim 7 wherein cleaning includes washing the tiles.

1 9. The method of Claim 7 wherein cleaning includes drying the tiles.

1 10. A method for manufacturing tiles for use in a raised floor system, the
2 tiles comprising an outer shell and an inner core material, the method comprising
3 steps of:

4 constructing the shells at a manufacturing facility;
5 providing a rack to hold the tiles during the manufacturing process,
6 stacking the shells in a vertical orientation on the rack;
7 transporting the shells to a remote location associated with a job site
8 while on the rack; and
9 filling the shells with a core material while on the rack at the remote
10 location.

11. The method of Claim 10 further comprising the step of:
12. cleaning the tiles while on the rack at the remote location.

13. The method of Claim 11 wherein cleaning includes washing the tiles.

14. The method of Claim 11 wherein cleaning includes drying the tiles.

15. The method of Claim 10 wherein the remote location is a construction
site.

16. A racking system for use in the manufacture of tiles to be used in a
17. raised floor system, the racking system comprising:
18. a plurality of racks, each rack having top and bottom faces having a
19. plurality of elongated pockets, each pocket adapted to receive an edge of a floor tile,
20. each rack further includes a peripheral support flange, wherein rows of tiles are
21. supported on each rack in a vertical orientation and are stacked on each other
22. vertically; and

23. a support rod ~~engaging~~ the support flanges on the racks for securing
24. the racks that are stacked on each other vertically.

25. 16. A rack for use in the manufacture of tiles to be used in a raised floor
26. system, the rack comprising:

3 a top face and a bottom face, each having a plurality of elongated
4 pockets, each pocket adapted to receive an edge of a floor tile to hold the tile in a
5 vertical orientation; and
6 a peripheral support flange that provides a contact surface for lifting the
7 rack.

1 17. A tile for use in a raised floor system comprising:
2 a shell having a top plate and a bottom plate;
3 an inner core material; and
4 a plurality of bosses on the bottom plate;
5 wherein, when tiles are stacked the bosses on the bottom plate of one
6 tile contact the top plate of an adjacent tile to provide clearance between the tiles.

1 18. A method of manufacturing panels including the steps of:
2 manufacturing a plurality of shells;
3 delivering the shells to a local facility;
4 receiving the shells at a local facility;
5 filling the shells with a filling material to create panels;
6 washing the panels;
7 drying the panels;
8 inspecting the panels; and
9 delivering the panels to a local installation site.

1 19. The method of Claim 18 wherein the shells are manufactured at a
2 remote facility.

1 20. The method of Claim 19 wherein the manufactured shells are loaded
2 into a plurality of racks.

1 21. The method of Claim 20 wherein the step of loading the shells into a
2 rack further includes the step of stacking the plurality of racks to form a plurality of
3 vertical stacks.

1 22. The method of Claim 21 wherein the vertical stacks are delivered to a
2 local facility.

1 23. The method of Claim 22 wherein the local facility is a mobile trailer.

1 24. The method of Claim 23 wherein the local facility is a structure located
2 at the installation site.

1 25. The method of Claim 22 wherein the step of filling the shells includes
2 the step of receiving a supply of dry bulk filler material.

1 26. The method of Claim 25 wherein the step of filling the shells includes
2 the step of mixing the dry bulk filler material with water to create the filling material.

1 27. The method of Claim 26 wherein the step of filling the shells includes
2 the step of pouring the filling material into the shells through an aperture.

1 28. The method of Claim 27 wherein the step of filling the shells includes
2 the step of closing the panels by inserting a cover in the aperture.

1 29. A facility for locally manufacturing panels comprising:
2 a structure for containing a plurality of stations;
3 a receiving station for receiving a plurality of shells;
4 a filling station for filling the shells with a filling mixture to create the
5 panels;
6 a washing station for washing the panels;
7 a drying station for drying the panels;
8 an inspecting station for inspecting the panels; and
9 a delivery station for delivering the panels to a local installation site.

1 30. The facility of Claim 29 wherein the structure is a vehicle.

1 31. The facility of Claim 30 wherein the structure has one or more guides
2 for moving a plurality of racks holding a plurality of panels through the plurality of
3 stations.

1 32. The facility of Claim 31 wherein the filling station includes a mixer for
2 mixing a supply of water with a supply of dry filler material to create the filling
3 mixture.

1 33. The facility of Claim 32 wherein the washing station includes a washing
2 machine for washing one or more racks holding a plurality of panels.

34. The facility of Claim 33 wherein the drying station includes a ventilation
supply and a dryer for drying one or more racks holding a plurality of tiles.

35. A method of holding panels or shells in a manufacturing operation
comprising the steps of:

3 loading a plurality of panels or shells having one or more fill apertures
4 into a rack;
5 holding the panels or shells vertically in the rack;
6 protecting a lower edge of the panels or shells in the rack; and
7 moving the rack through a plurality of stations, whereby one or more
8 manufacturing operations may be performed on the panels or shells.

1 36. A rack for holding and protecting shells and panels comprising:
2 a horizontal tray having a top side, a bottom side, and vertical walls
3 extending upward from the perimeter of the horizontal tray; and
4 a continuous extension projecting horizontally outward from an upper
5 end portion of the vertical walls.

1 37. The rack of Claim 36 wherein the top surface of the tray has a plurality
2 of holders.

1 38. The rack of Claim 37 wherein the holders comprise a plurality of
2 uniformly spaced and parallel notches in the top side of the tray.

1 39. The rack of Claim 38 wherein the vertical walls are contiguous and
2 comprise end walls parallel to the notches and side walls perpendicular to the
3 notches.

1 40. The rack of Claim 39 further comprising one or more drain apertures,
2 aligned with a bottom portion of one or more notches, and extending through one or
3 more side walls.

1 41. The rack of Claim 40 wherein the extension has a plurality of edge cut-
2 outs.

1 42. The rack of Claim 41 wherein the edge cut-outs are in the shape of
2 cylindrical segment.

1 43. The rack of Claim 42 further comprising a continuous recess on an
2 inside edge of an upper end portion of the vertical walls.

1 44. The rack of Claim 43 wherein the recess is sized to receive the bottom
2 portion of a similar rack in a nesting configuration.

1 45. The rack of Claim 44 further comprising a plurality of notches on the
2 bottom side, whereby the notches on the top side and the notches on the bottom
3 side are symmetric.

1 46. The rack of Claim 45 further comprising one or more vertical keyways
2 on an interior side of one or more end walls.

1 47. The rack of Claim 46 wherein the notches are sized to prevent contact
2 between the bottom portion of the notches and an edge extension of a panel
3 received in the notch and held by the rack.

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